

**TABLE 2-1**  
Chemical-Specific To-Be-Considered (TBC) Criteria for Soil

Contaminants	Chemical-Specific TBCs		Applicable Target Concentrations (mg/kg)
	Inboard Sites (mg/kg)	Upland Sites (mg/kg)	
Metals			
Arsenic	16.7	15.3	N/A
Barium	190	217	N/A
Beryllium	1	0.72	N/A
Boron	36.9	3.6	N/A
Cadmium	1.2	N/A <sup>b</sup>	N/A
Chromium	112	112	N/A
Cobalt	27.6	14.4	N/A
Copper	68.1	68.1	N/A
Lead	43.2	43.2	N/A
Manganese	943	943	N/A
Total Mercury	0.43	0.43	N/A
Nickel	113	112	N/A
Silver	1	1	N/A
Vanadium	118	38.9	N/A
Zinc	158	158	N/A
Pesticides			
Total Chlordanes	0.0023	0.0023	N/A
Total DDTs	0.007	0.007	N/A
Dieldrin	0.00072	0.00072	N/A
Endrin Aldehyde	N/A	N/A	0.0215
Endosulfan Sulfate	N/A	N/A	0.00286
Semivolatile Organic Compounds			
Dibenzofuran	N/A	N/A	0.11
Petroleum Hydrocarbons			
Diesel/Motor Oil	144	144	N/A
Gasoline/JP-4	12	12	N/A
Volatile Organic Compounds			
Xylenes	N/A	N/A	0.04

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Contaminants		Inboard Sites (mg/kg)	Upland Sites (mg/kg)	Applicable Target Concentrations (mg/kg)
Polynuclear Aromatic Hydrocarbons				
Total PAHs		4.02	4.02	N/A
2-Methylnaphthalene		0.0194	0.0194	N/A
Acenaphthene		0.026	0.026	N/A
Anthracene		0.088	0.088	N/A
Benz(a)anthracene		0.412	0.412	N/A
Benzo(a)pyrene		0.430	0.430	N/A
Benzo(b)fluoranthene		0.371	0.371	N/A
Benzo(g,h,i)perylene		0.310	0.310	N/A
Chrysene		0.384	0.384	N/A
Dibenz(a,h)anthracene		0.0634	0.0634	N/A
Fluoranthene		0.600	0.600	N/A
Fluorene		0.0253	0.0253	N/A
Indeno(1,2,3-cd)pyrene		0.382	0.382	N/A
Naphthalene		0.160	0.160	N/A
Phenanthrene		0.240	0.240	N/A
Pyrene		0.665	0.665	N/A
mg/kg	Milligrams per kilogram			
N/A	Not applicable			
DDT	Dichlorodiphenyltrichloroethane			
JP	Polynuclear aromatic hydrocarbons			
TBC	To-be-considered			

**TABLE 2-2**  
Location-Specific ARAR and Performance Standards

Source	Citation	ARAR Status	Description of ARARs
California Endangered Species Act	50 Code of Federal Regulation 402	Applicable	Contains standards for the identification and protection of listed or proposed threatened or endangered plants or animals.
California Fish and Game Code	Section 1900 - California Native Plant Protection Act	Applicable	Contains standards for the identification and protection of plants by the act.
	Sections 3511, 4700, and 5050		Identify and protect certain birds, mammals, reptiles, and amphibians.
Federal Endangered Species Act		Applicable	Contains standards for the identification and protection of current or possible future-listed threatened or endangered plants or animals. Section 7 requires federal agencies to consult the U.S. Fish and Wildlife Service to ensure that actions do not jeopardize listed species or adversely modify their critical habitat. Section 9 prohibits taking of endangered species, while Section 10 permits incidental takes.
Federal Clean Water Act	40 CFR 230.3, Section 404 - Definition of Wetlands	Relevant and Appropriate	Authorized the U.S. Army Corps of Engineers (USACE) to delineate wetlands.
	USACE, Public Notice 92-7: Interim Testing Procedures for Evaluating Dredged Material Disposed in San Francisco Bay	Relevant and Appropriate	Reassures that all wetland creation, uplands disposal, or dredging projects complete certain notifications and listings.
			Provides the USACE to permit discharges of dredged materials or fill materials into navigable waters.
Coastal Zone Management Act	16 USC 1456	Relevant and Appropriate	Establishes the authority of the Bay Conservation and Development commission to regulate construction and other activities within 100 feet inland from highest tidal action.
Rivers and Harbors Act	33 CFR 323.1, Parts 320, 325, and 328	Relevant and Appropriate	Gives the USACE permitting authority over the discharge of dredged materials into the waters of the United States. In addition, the USACE must permit any work within historically navigable waters, including behind levees.

**TABLE 2-2**

Location-Specific ARAR and Performance Standards

Source		Citation	ARAR Status	Description of ARARs
Fish and Game Code		Section 1603	Relevant and Appropriate	It is unlawful for any person to substantially direct or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department or use any material from the streambeds, without first notifying the department of the activity.
Fish and Game Code		Section 5650 and 5652	Relevant and Appropriate	It is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of the state any material listed in the Code.

ARAR    Applicable or relevant and appropriate requirements  
CFR     Code of Federal Regulations  
USACE   U.S. Army Corps of Engineers  
USC     United States Code

**TABLE 2-3**  
State and Federal Action-Specific Applicable or Relevant and Appropriate Requirements

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description of ARARs
<b>Federal ARARs</b>			
Federal Clean Water Act	40 Code of Federal Regulation (CFR) 122 – EPA Administered Permit Programs: The National Discharge Elimination System	Subsection(s) as Listed Below	Requirements to ensure storm water discharges from remedial action activities do not contribute to a violation of surface water quality standards.
	40 CFR 122.26	Relevant and Appropriate	All reasonable steps must be taken to minimize or prevent discharges which have a reasonable likelihood of causing adverse impacts on surface water quality (40 CFR 122.41(d)). Discharges into surface water must achieve federal and state water quality standards (40 CFR 122.44(d)).
	40 CFR 122.41(d)	Relevant and Appropriate	
	40 CFR 122.41(e)	Relevant and Appropriate	
	40 CFR 122.44(d)	Relevant and Appropriate	
<b>State of California Hazardous Waste ARARs (Federal ARARs)</b>			
California Hazardous Waste Control Law	22 CCR <sup>d</sup> 66261.1 through 22 CCR 66261.7	Relevant and Appropriate	The chemicals recovered from the sediments, surface soil, or subsurface soil may need to be managed as either a Resource Conservation and Recovery Act (RCRA) or non-RCRA hazardous waste. The treatment, storage, and disposal requirements for these wastes are either applicable or relevant and appropriate (depending upon the classification of the waste material) and they include: using containers to store the recovered product that are compatible with this material (22 CCR 66264.172); using containers that are in good condition (22 CCR 66264.171); segregating the waste from incompatible wastes (22 CCR 66264.177); inspecting the containers (22 CCR 66264.176); and providing adequate secondary containment for the water stored (22 CCR 66264.175); containers must be closed during transfer (22 CCR 66264.173); and all hazardous material must be removed at closure (22 CCR 66264.178).
	Title 22, Division 4.5 (Environmental Health Standards for Management of Hazardous Waste), Chapter 14 (Standards for Owners and Operators of Hazardous Waste Transfer, Treatment, Storage, and Disposal Facilities), Article 9 (Use and Management of Containers)	Subsection(s) as Listed Below	
	22 CCR 66264.171 through 22 CCR 66264.178	Relevant and Appropriate	If during excavation or cleanup activities hazardous waste is identified throughout the waste characterization process, the hazardous waste will be managed in accordance with what the standards state. It is anticipated that the contaminated sediments and soil at the Inboard Areas would not be characterized as hazardous waste, therefore these requirements would be considered relevant and appropriate.

**TABLE 2-3**  
State and Federal Action-Specific Applicable or Relevant and Appropriate Requirements

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description of ARARs
California Hazardous Waste Control Law	Title 22, Division 4.5 (Environmental Health Standards for Management of Hazardous Waste), Chapter 12 (Standards Applicable to Generators of Hazardous Waste), Article 1 (Applicability)	Subsection(s) as Listed Below	These standards are only applicable to those sites where excavated wastes are classified as hazardous or non-RCRA hazardous waste. These standards establish requirements for generators of hazardous waste located in California. It is anticipated that the contaminated sediments and soil at the Inboard Areas would not be characterized as hazardous waste, therefore these requirements would be considered relevant and appropriate.
	22 CCR 66262.10 through 22 CCR 66262.12	Relevant and Appropriate	
	Title 22, Division 4.5 (Environmental Health Standards for Management of Hazardous Waste), Chapter 14 (Standards for Owners and Operators of Hazardous Waste Transfer, Treatment, Storage, and Disposal Facilities), Article 1 (General)	Subsection(s) as Listed Below	These standards are only applicable to those sites where excavated material is classified as hazardous waste. These standards establish minimum requirements, which define the acceptable management of hazardous waste. It is anticipated that the contaminated sediments and soil at the Inboard Areas would not be characterized as hazardous waste, therefore these requirements would be considered relevant and appropriate.
	22 CCR 66264.1 through 22 CCR 66264.4	Relevant and Appropriate	
	Title 22, Division 4.5 (Environmental Health Standards for Management of Hazardous Waste), Chapter 14 (Standards for Owners and Operators of Hazardous Waste Transfer, Treatment, Storage, and Disposal Facilities), Article 4 (Contingency Plan and Emergency Procedures)	Subsection(s) as Listed Below	These standards are only applicable to those sites where excavated material is classified as hazardous waste. These standards require the development of a set of contingency and emergency procedures. It is anticipated that the contaminated sediments and soil at the Inboard Areas would not be characterized as hazardous waste, therefore these requirements would be considered relevant and appropriate.
	22 CCR 66264.50 through 22 CCR 66264.56	Relevant and Appropriate	

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State and Federal Action-Specific Applicable or Relevant and Appropriate Requirements

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description of ARARs
California Hazardous Waste Control Law	Title 22, Division 4.5 (Environmental Health Standards for Management of Hazardous Waste), Chapter 14 (Standards for Owners and Operators of Hazardous Waste Transfer, Treatment, Storage, and Disposal Facilities), Article 12 (Waste Piles)	Subsection(s) as Listed below	Delineates requirements for the management of waste piles for hazardous waste. This regulation is applicable to sites where excavated materials are classified as hazardous wastes and managed in waste piles. These regulations include 22 CCR 66264.251 - Design and Operating Requirements; 22 CCR 66264.254 - Monitoring and Inspection; 22 CCR 66264.256 - Special Requirements for Ignitable or Reactive Waste; 22 CCR 66264.257 - Special Requirements for Incompatible Wastes; 22 CCR 66264.258 - Closure and Post-Closure Care; and 22 CCR 66264.259 - Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027.
	22 CCR 66264.250 through 22 CCR 66264.259	Relevant and Appropriate	If during excavation or cleanup activities, hazardous waste is identified through the proper characterization process and the hazardous waste will be managed in accordance with the standards stated in these sections of the regulation. It is anticipated that the contaminated sediments and soil at the Inboard Areas would not be characterized as hazardous waste, therefore these requirements would be considered relevant and appropriate.
California Hazardous Waste Control Law	Title 22, Division 4.5 (Environmental Health Standards for Management of Hazardous Waste), Chapter 18 (Land Disposal Restrictions), Article 1 (General)	Subsection(s) as Listed Below	Provides the purpose, scope, and applicability of LDRs. The title of the sections of the regulations are; 22 CCR 66268.3 - Dilution Prohibited As a Substitute for Treatment; 22 CCR 66268.7 - Waste Analysis and Record keeping; and 22 CCR 66268.9 - Special Rules Regarding Wastes That Exhibit a Characteristic.
	22 CCR 66268.1 through 22 CCR 66268.9	Applicable only if waste is characterized as hazardous waste	If during excavation or cleanup activities hazardous waste is identified through the proper characterization process and will be land disposed within the meaning of the LDRs, the hazardous waste will be managed in accordance with the standards stated in applicable sections of the regulation. Only applicable if hazardous wastes are disposed of or treated in an area not designated as a CAMU or disposed of or treated beyond the area of contamination. These requirements are not ARARs if the waste is not characterizes as hazardous waste.

**TABLE 2-3**

State and Federal Action-Specific Applicable or Relevant and Appropriate Requirements

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description of ARARs
California Hazardous Waste Control Law	Title 22, Division 4.5 (Environmental Health Standards for Management of Hazardous Waste), Chapter 18 (Land Disposal Restrictions), Article 3 (Prohibitions on Land Disposal)  22 CCR 66268.30 through 22 CCR 66268.35	Subsection (s) as Listed Below  Applicable only if waste is characterized as hazardous waste	These standards are applicable to sites where excavated material is classified as hazardous waste and is disposed of or treated in an area not designated as a CAMU. Provides waste-specific LDRs for 22 CCR 66268.30 - Waste Specific Prohibitions--Solvent Wastes; 22 CCR 66268.31 - Waste Specific Prohibitions -- Dioxin-Containing Wastes; 22 CCR 66268.32 - Waste Specific Prohibitions--California List Wastes; 22 CCR 66268.33 - Waste Specific Prohibitions--First Third Wastes; 22 CCR 66268.34 - Waste Specific Prohibitions--Second Third Waste; and 22 CCR 66268.35 - Waste Specific Prohibitions--Third Waste.  If during excavation, treatment processes, or cleanup activities hazardous waste is identified through the proper characterization process and will be land disposed within the meaning of the LDRs, the hazardous waste will be managed in accordance with the standards stated in these sections of the regulation. These requirements are not ARARs if the waste is not characterizes as hazardous waste.
California Hazardous Waste Control Law	Title 22, Division 4.5 (Environmental Health Standards for Management of Hazardous Waste), Chapter 18 (Land Disposal Restrictions), Article 5 (Prohibitions on Storage)  22 CCR 66268.50	Subsection(s) as Listed Below  Applicable only if waste is characterized as hazardous waste	This standard is applicable to sites where excavated material is classified as hazardous waste. The standard provides prohibitions on storage of restricted wastes.  If during excavation, treatment processes, or cleanup activities hazardous waste is identified through the proper characterization process and will be land disposed within the meaning of the LDRs, the hazardous waste will be managed in accordance with the standards stated in these sections of the regulation. These requirements are not ARARs if the waste is not characterizes as hazardous waste.
California Hazardous Waste Control Law	Title 22, Division 4, Chapter 30  22 CCR 66700 (Waste Extraction Test Procedure)	Subsection(s) as Listed Below  Relevant and Appropriate	Prescribes the leachate test methods which are to be used in evaluating materials for proposed wetlands creation.



**TABLE 2-3**  
State and Federal Action-Specific Applicable or Relevant and Appropriate Requirements

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description of ARARs
<b>State of California Air ARARs</b>			
California Clean Air Act	Bay Area Air Quality Management District (BAAQMD), Regulation 6 (Particulate Matter and Visible Emissions)	Applicable	This regulation limits visible emissions, particulate emissions by weight, and emissions from sulfuric acid plants and sulfur recovery units.  This regulation is applicable to any remedial action activity, which may discharge air contaminants as defined by the rule.
	BAAQMD, Regulation 7 (Odorous Substances)	Applicable	This regulation limits odorous emissions per complaints received from persons on properties where the emissions did not occur and places maximum concentration limits on certain organic emissions.
	BAAQMD, Regulation 8, Rule 40 (Aeration of Contaminated Soil and Removal of Underground Storage Tanks)	Applicable	This rule limits the emissions of organic compounds with organic chemicals or petroleum and provides procedures for controlling emissions during underground storage tank removal and soil stockpiling. Exemptions are provided for soil which contains non-volatile hydrocarbons and for soil, which is in-situ.
	BAAQMD, Regulation 11 (Hazardous Pollutants, Rule 1 (Lead))	Relevant and Appropriate	This regulation limits the emission of lead to the atmosphere based upon ground-level concentrations of lead in air.
<b>State of California Groundwater and Soil ARARs</b>			
California Water Code	State Water Resources Control Board (SWRCB)	Relevant and Appropriate	Must identify the sources of sediment and other pollutants that affect the quality of storm water discharges and implement practices to reduce these discharges.
	Order 92-08-DWQ (General order for storm water management at construction sites)		Storm water discharges from construction sites must meet pollutant limits and standards. The narrative effluent standard includes the requirements to implement BMPs and/or appropriate pollution prevention control practices.  Inspections of the construction site prior to anticipated storm events and after actual storm events need to be conducted to identify areas contributing to storm water discharge and evaluated for the effectiveness of best management practices and other control practices.  Applies to construction sites five acres or greater in size. It also applies to smaller sites that are part of a larger common plan of development or sale.  Administrative portions of this permit are not applicable in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

**TABLE 2-3**

State and Federal Action-Specific Applicable or Relevant and Appropriate Requirements

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description of ARARs
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13140, 13240)	San Francisco Bay Basin (Region 2) Water Quality Control Plan	Relevant and Appropriate	<p>Establishes water quality objectives, including narrative and numerical standards that protect the beneficial uses of surface waters and groundwaters in the region. The uses are municipal, domestic, agricultural, and industrial service supply.</p> <p>Specific applicable portions of the Basin Plan include beneficial uses of affected water bodies water quality objectives to protect those uses.</p>
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13140, 13240)	SWRCB Resolution 68-16	Relevant and Appropriate	The resolution establishes requirements for activities involving discharges of contamination directly into surface waters or groundwater. According to the RWQCB, this resolution requires that high quality surface and groundwater to be maintained to the maximum extent possible.
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13140, 13240)	SWRCB Resolution 88-63	Relevant and Appropriate	<p>Specifies that with certain exceptions all ground and surface waters have the beneficial use of municipal or domestic water supply. Applies in determining beneficial uses for waters that may be affected by discharges of waste.</p> <p>State Water Resources Control Board Resolution 88-63 applies to all sites that may be affected by discharges of waste to groundwater or surface water. The resolution specifies that with certain exceptions all groundwater and surface waters have beneficial use of municipal or domestic water supply. These exceptions include, among others, if 1) the total dissolved solids (TDS) exceed 3,000 mg/L or 2) the water source does not provide sufficient water to supply a single well capable of producing an average sustained yield of 200 gallons per day. In the case of HAAF, both these exceptions apply, therefore, groundwater below the site may not be considered suitable for municipal or domestic water supplies.</p>